F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2004-073RS	COOK	74	53
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

62812

NOTES:

1. This is a Standard Drawing made by the Illinois Department of Transportation. This drawing is included for the convenience of the Contractor.

BILL OF MATERIAL

Item	Unit	Quantity
Bar Splicers	Each	138

NOTES

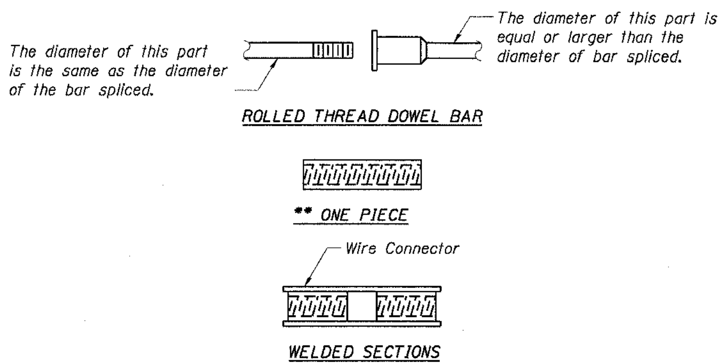
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

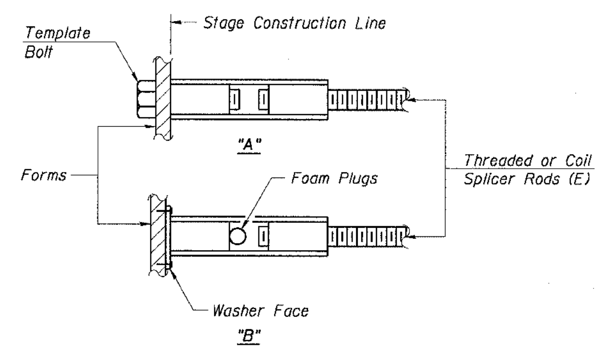
Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



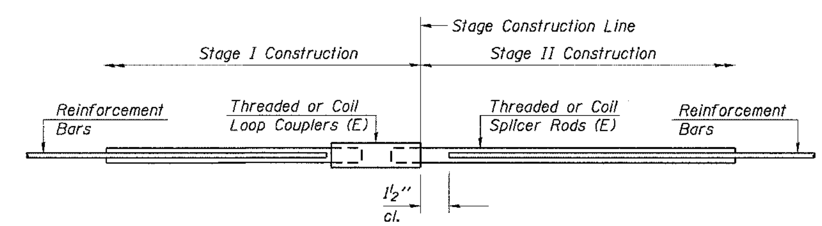
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

Bar Size	No. Assemblies Required	Location
#4	6	51st Street Over FAI 90/94 Dan Ryan Expwy. - East Approach
#5	48	51st Street Over FAI 90/94 Dan Ryan Expwy. - East Approach
#4	12	51st Street Over FAI 90/94 Dan Ryan Expwy. - West Approach
#5	72	51st Street Over FAI 90/94 Dan Ryan Expwy. - West Approach

BAR SPLICER ASSEMBLY DETAILS



STANDARD

CTE ENGINEERS
CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.
303 EAST WACKER DRIVE, SUITE 600
CHICAGO ILLINOIS 60601-5212, PHONE: (312) 938-0300

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)
51st ST (WENTWORTH AVE AND WELLS ST)

STD-1, STANDARD DETAILS FOR BAR SPLICER ASSEMBLY

SCALE: None DRAWN BY: -
DATE: December 23, 2004 CHECKED BY: -